

CoCoRaHS

Winter 2009-2010

OBSERVER

*Tell the National Weather Service How Much Rain or Snow **You** Got!*

CoCoRaHS (Community Collaborative Rain, Hail, and Snow Network) is a unique, non-profit, community-based network of volunteers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow). By using low-cost measurement tools and utilizing an interactive website, the goal is to provide the highest quality data for natural resource, education, and research applications.



EF-2 tornado damage in Casey County on October 9.
Photo: NWS

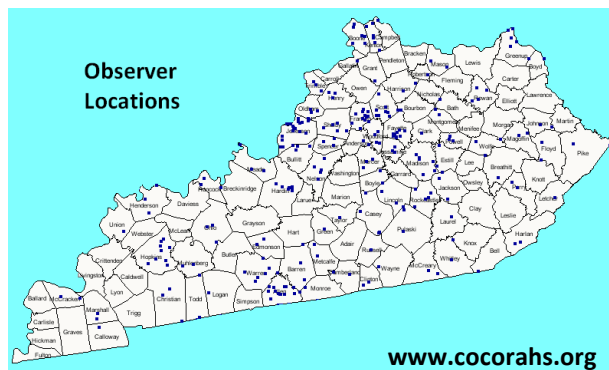
A big CoCoRaHS thank you to everyone who signed up this fall:

Morning View 2.9SW, Kenton County
Windsor 0.8NW, Casey County
Mount Sterling 3.2NNW, Montgomery County
Simpsonville 1.5SSE, Shelby County
Burkesville 0.7NE, Cumberland County
Shively 1.9W, Jefferson County

Almo 4.7WNW, Calloway County
La Grange 3.9W, Oldham County
Waddy 0.9SW, Shelby County
Beaver Dam 5.7SSE, Ohio County
Bedford 1.6NW, Trimble County
Corbin 0.8ESE, Whitley County

In This Issue...

Measuring Snow and Ice	2-3
Plotting Your Reports	4
Trace Precipitation and Dew	4
Interesting Daily Comments	4
Autumn Weather Data	5
Stations That Reported Every Day	5
Significant Weather Report	5



Measuring Snow and Ice



March 8, 2008 at the Louisville NWS office. Photo: NWS

Measuring snow and ice takes a little more time and trouble than measuring rain, however the winter precipitation data provided by CoCoRaHS observers are very important to the National Weather Service and other users. Any time you're able to send us snow information we greatly appreciate it!



The first step comes before any snow even occurs. At the start of the cold season, or when snow appears in the forecast, you'll want to remove the inner tube and the funnel from your rain gauge. Keep them inside until warm weather returns, leaving only the large outer gauge outside. The funnel and inner tube can crack during times of icy weather and when the temperature fluctuates between sub-freezing and above freezing temperatures. Also, heavy snow will clog up the funnel.

Ideally, it's good to have a snow board on which to measure snow depth on the ground. A snow board is simply a 2'x2' piece of plywood that has been painted white, and placed in a spot that doesn't drift easily. Of course, a snow board isn't absolutely necessary. The key is to pick a flat place away from obstructions that allows snow to accumulate easily. A metal yard stick is the best choice for measuring snow depth, but any ruler will do. Remember, though, to report your snow depth in tenths of inches (not 16ths, 8th, etc.). Clean off the snow board after each measurement.

Tip:

Put a flag in the ground next to your snow board so you can find it when it's buried beneath the snow.

If there was a lot of wind with the snowfall, and it's difficult to find a level spot on which to measure, then measure as many different spots as you have time for and average the numbers together.

Please measure the depth of the snow on the ground whenever snow is present, regardless if any snow has fallen in the last 24 hours or not. You can send in a report of zero precipitation with your snow depth.

Sometimes there are patches of snow here and there, but with bare ground showing as well. If *more* than half of the ground has snow on it, measure the snow that is there and average it with the bare ground (zero depth on the bare ground). If *less* than half of the ground has snow on it, simply carry a "trace" of snow depth. Be careful to stay away from piles of shoveled snow.



March 8, 2008 at Anneta, KY.

Photo: Barbara Scott

continued next page..

Measuring Snow and Ice

When fallen snow fills up your gauge, you'll need to melt that snow into water to get a liquid precipitation amount (the number you normally enter at the website for rainfall during warm weather).

1. Bring the gauge inside.
2. Locate the inner tube and funnel that you removed before the snow fell.
3. Fill the inner tube with warm (not hot) water. *Write down the amount of water you put in the inner tube!*
4. Pour the warm water into the large, snow-filled outer tube. Swirl the snow and water around until all the snow has melted.
5. Place the funnel on the inner tube and pour the water from the large outer tube back into the inner tube. Record the new amount of liquid in the inner tube.
6. Subtract the amount you recorded in step 3 out of the number you got in Step 5. That's your answer! That's the "water equivalent" of the snow that fell, or, in other words, if the snow had fallen as rain, that's how much rain would have fallen.

You may have heard that there is a 10-to-1 ratio between snow and rain (so, 1.0" of snow would be .10" of rain). This ratio is actually not true much of the time, so it's best if you actually measure the liquid equivalent using the above process, rather than assuming an arbitrary 10-to-1 ratio.



Freezing Rain

Freezing rain falls as a liquid, then freezes into ice when it hits a cold surface. Since it falls as a liquid, it is not snow...it's recorded as liquid rainfall. Of course, if your gauge is encased in ice, it can be quite difficult to come up with an accurate measurement. To attempt to get a measurement, melt the ice that is on the *inside* of your gauge and add it to any liquid water that might be in the bottom of the gauge (use the same method as measuring snow in the gauge, above). Make a mention in the comments section that you received freezing rain. If you have time, you can measure the thickness of the ice on branches or your car and include that in your comments.

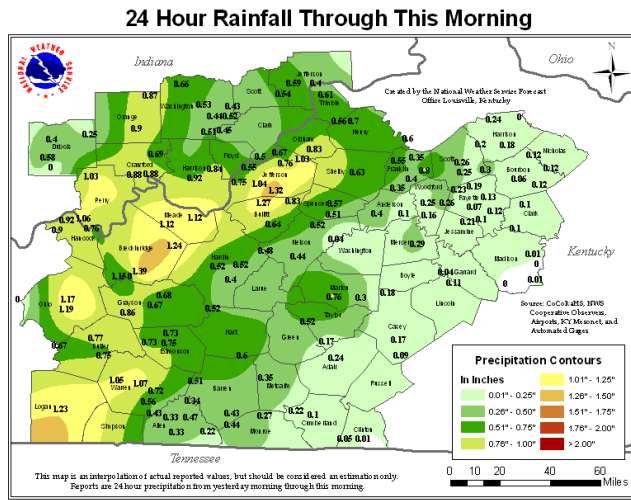
Note:

Sleet (and hail) are recorded as snowfall (rarely more than a trace).



January 27, 2009 near Buffalo, KY

We Use Everyone's Reports



Perhaps you've seen the 24-hour precipitation maps we occasionally post in the "Top News" section of the Louisville NWS web-site. A major source of data for these maps is your CoCoRaHS reports. Although only select stations have their actual value plotted on the map, we do include *all* available CoCoRaHS reports when constructing the maps. The more reports we receive, the better the map looks. So, keep sending in those rain and snow numbers!

Sprinkles, Flurries, Drizzle, and Dew

Sprinkles, flurries, and drizzle are called "trace" events by the National Weather Service. That's because the precipitation amount is usually less than 0.01", and is not added in to any running precipitation totals (like for the month, season, or year). However, it's still important to report trace amounts of precipitation.

If you witness any precipitation, even if it's just one raindrop or snowflake, you should report (at least) a trace. If you observed light precipitation but the next morning your rain gauge is dry, report a trace.

Dew is different. Since dew does not fall from the sky (it forms directly on surfaces), dew is not reported as precipitation in the United States (though it is in several European countries including England, Spain, and France). So, if you received dew — even if it adds up to 0.01" in your gauge — please do not report it. If you wish, you may make a comment on the dew in the comments section of your daily report.



We'd love to see a picture of your station! Feel free to send any photos to us at w-lmk.webmaster@noaa.gov.

My daughter at the barn got no rain, but the one riding at the back of our little farm got soaked. At the house we got only sprinkles. KY-MN-6, Richmond 9.2 ESE, September 23

It's been raining so much here recently that, if the sun reappears, I fear someone might report a UFO. KY-AL-11, Scottsville 4.9 NE, October 15

And it is still raining. Ground feels like soggy, saturated sponge. Haven't had to fill Doggie Dooley with water since water table is staying so high. KY-AN-2, Lawrenceburg 2 SSW, September 26

Light drizzle falling at observation again today and there has been rain or drizzle falling nearly continuously for 74 straight hours. KY-BE-1, Talbert, 1.9 ESE, October 17

Daily Comments Reports

Autumn Weather Data

Highest Precipitation Amount: 20.60" at Guthrie 0.8 WNW (KY-TD-2), sent a report every day

Lowest Precipitation Amount: 7.89" at Prestonsburg 3.7 WSW (KY-FD-1), sent a report on 89 days

Heaviest One-Day Amount: 4.12" at Henderson 0.4 SSW (KY-HS-1) on September 21, and at Fox Chase 1.4 W (KY-BT-1) on October 9

Heaviest One-Day Amount Averaged Across Kentucky: 1.33" on October 9, among 95 reporting stations

Stations That Sent in a Report Every Day

Scottsville 9.2 ESE, KY-AL-4
Scottsville 3.5 WNW, KY-AL-14
Bradfordsville 8.5 ENE, KY-CS-1
Irvine 9.9 NNW, KY-ES-2
Frankfort 3.3 NE, KY-FR-1
Glencoe 3.8 NNE, KY-GL-1
Anchorage 2.8 NE, KY-JF-1
London 1.7 NE, KY-LL-1
Irvington 4.5 N, KY-MD-1
New Haven 6.4 NE, KY-NL-4
Guthrie 0.8 WNW, KY-TD-2

Thank You!

Intense Precipitation Report Is Now Significant Weather Report

What used to be called the "Intense Precipitation Report" is now the "Significant Weather Report." The new name more accurately describes the utility of this feature. When you enter a Significant Weather Report, your report immediately flashes on the computer screens at the National Weather Service, letting the meteorologists know instantly what's happening at your location.



Significant Weather Report		Submit Data	Reset
Station Number : KY			
Station Name :			
* Denotes Required Field			
12/1/2009	* Observation Date		
PM	* Observation Time		
Minutes	Time duration that the report covers		
Rain			
<input type="checkbox"/>	New Rain and Melted Snow that has fallen during the report duration, in inches to the nearest hundredth		
<input type="checkbox"/>	Total Precipitation, rain and melted snow, since storm began, in inches to the nearest hundredth		
Snow			
<input type="checkbox"/>	Depth of New Snow that has fallen during the report duration, in inches to the nearest tenth		
<input type="checkbox"/>	Total depth of snow and ice on ground at the time of this observation to nearest half inch		
Additional Information			
<input checked="" type="radio"/> Yes <input type="radio"/> No Report was taken at registered location?			
Was There Flooding?			
<input type="radio"/> No			
If Yes, how severe?			
<input type="radio"/> Minor (typical). Street or field flooding.			
<input type="radio"/> Unusual street or field flooding (only see this every few years)			
<input type="radio"/> Severe Flooding			
<input type="radio"/> Extreme (never seen it this bad before)			
Observation Notes (This will be available to the public)			
<div></div>			
		Submit Data	Reset